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Successful Revascularization by Pulse Infusion Thrombolysis in a Patient With Kawasaki Disease Combined With Acute Myocardial Infarction

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A 24-year-old man was admitted to our hospital because of continuous anterior chest discomfort. He had a history of Kawasaki disease. He was diagnosed with an ST-segment elevation myocardial infarction, showing thrombotic occlusion of an aneurysm in the right coronary artery (Fig. 1A). Thrombus removal was attempted with an aspiration catheter, but a large thrombus burden remained (Fig. 1B). The decision was made to perform intracoronary thrombolysis with a pulse infusion thrombolysis (PIT) catheter (Hand PIT, Argo Cure, Toyota, Japan) designed to allow intermittent thrombolytic agent delivery directly to the thrombus through side-holes connected to a

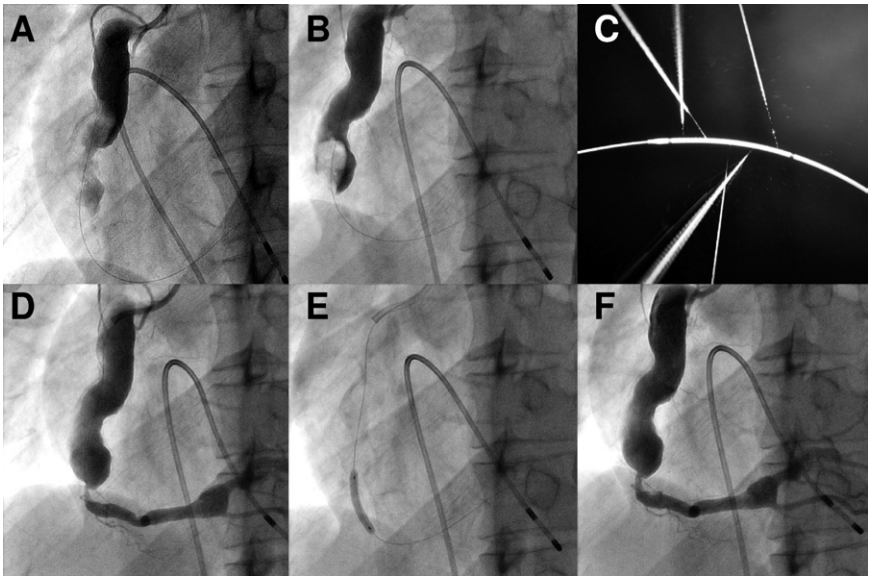

Figure 1. Successful Revascularization by Pulse Infusion Thrombolysis

(A) Massive thrombotic occlusion in giant aneurysm. **(B)** After thrombus aspiration. **(C)** Ex-vivo test of pulse infusion thrombolysis catheter. **(D)** After pulse infusion thrombolysis. **(E)** Adjunctive simple balloon angioplasty. **(F)** Thrombolysis In Myocardial Infarction flow grade 3 was achieved.

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manual pump (Fig. 1C). After the PIT with a total 800,000-IU dose of tissue plasminogen activator had been used, the thrombus was noted to have disappeared (Fig. 1D). Adjunctive simple balloon angioplasty was performed (Fig. 1E), and Thrombolysis In Myocardial Infarction flow grade 3 was achieved (Fig. 1F). A coronary stent was not used, to avoid malapposition and acute thrombotic occlusion. The patient was stable after the procedure during the inpatient hospital stay and has had an uneventful recovery thereafter. Our case suggests that PIT might be a useful strategy in case of ST-segment elevation myocardial infarction with massive thrombus in a giant coronary aneurysm.

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